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''Water can'' penis caused by tuberculosis

Tuberculosis of the penis is a very rare condition, clinically manifesting as primary or secondary tuberculosis or tuberculide.[1] Penile involvement secondary to urethral tuberculosis is rare and its presentation with periurethral fistulas leading to ''water can'' penis is unknown. We report this rather intriguing condition in a patient.

A 40 year old male agricultural labourer presented with a 1 year history of purulent discharge per urethra with multiple discharging sinuses on the tip of the penis. The patient was asymptomatic about a year ago, when he developed multiple nodules on the glans penis that ulcerated to discharge purulent material. These nodules became persistent sinuses and discharged pus. Within a few weeks, he started passing urine through these sinuses in the glans penis. He also experienced difficulty in micturition but it was not associated with pain or strangury. The patient had no systemic complaints. He was married with two children and had no history of extramarital contact or genital ulcers.

On physical examination, the penis shape was like a saxophone. The prepuce and glans penis were oedematous and indurated. The glans penis had multiple sinuses around the urethral meatus (fig 1). On squeezing the penis, pus was expressed from the meatus and the sinuses. The glans penis also showed areas of depigmentation (vitiligo). The distal part of the shaft of the penis showed induration involving corpora cavernosa whereas the proximal part was devoid of any lesion. The testes, bilateral epididymis, and scrotum were normal. The vas deferens was normal on palpation. The prostate was normal on rectal examination.

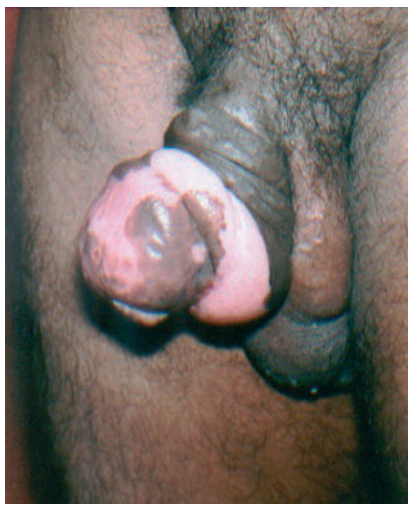

Figure 1 Saxophone penis with multiple sinus openings over the glans penis.

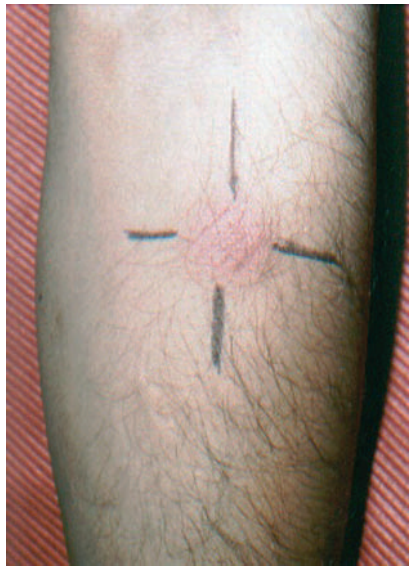

Figure 2 Forearm showing positive Mantoux reaction.

The routine haemogram revealed an elevated erythrocyte sedimentation rate of 100 mm in the first hour. His liver and renal functions were normal. The discharge smear stained with Gram stain and Zeihl-Neelsen stain. The Gram stained smear revealed numerous pus cells and acid fast stain showed abundant acid fast bacilli. Culture for *Mycobacterium tuberculosus* grew contaminants. A roentgenogram of the chest and penis was unremarkable. An intravenous pyelogram was normal. Voiding cystourethrography revealed glandular urethral stricture with urethrocutaneous fistulas. Ultrasonography of abdomen and prostate was normal. Mantoux skin test was strongly positive (30×30 mm) (fig 2). His venereal disease research laboratory test (VDRL) and HIV serology was non-reactive.

Based on these clinical features, positive Mantoux test and acid fast bacilli in the urethral smear, the diagnosis of urethral tuberculosis with urethrocutaneous fistula was made. The patient was started on antituberculous treatment comprising isoniazid 300 mg, rifampicin 600 mg, pyrazinamide 1500 mg, and ethambutol 800 mg per day. The patient showed marked improvement after 4 weeks of treatment. The sinuses closed and discharge ceased. Patient was referred to urology for management of stricture, which was planned after the antituberculous treatment. The patient tolerated antituberculous treatment and completed 9 months of treatment with remarkable recovery in the swelling of the penis.

Genital involvement occurs in 50% of male patients with urogenital tuberculosis. Penile tuberculosis is rare with less than 1% of patients having penile involvement.[2] Tuberculosis of the penis usually presents as ulcers, tubercular cavernositis, or nodules. In most cases, the lesion appears as a superficial, solitary, painless ulcer on the glans penis. It can be clinically indistinguishable from malignant disease.[3] Rarely, lesions may persist as solid nodule or cavernositis with ulceration.[4 5] Papulonecrotic tuberculide may also present as an ulcer on the penis.[1] Penile involvement may occur secondary to coexisting urinary tract tuberculosis. The transmission occurs secondary to bacilluria in these patients. Infection of the penis may occur by direct contact at the time of intercourse with a partner having urogenital tuberculosis.[2]

Tuberculosis of male urethra is an uncommon condition and presents as urethral strictures, periurethral abscesses, or fistula formation. Fistulas can occur in the perineum leading on to ''water can'' perineum.[6] Similar occurrence of fistulas in penis can aptly be designated as ''water can'' penis. In our case, penile involvement occurred secondary to urethral tuberculosis. Such involvement of the penis by tuberculosis is unique and not reported in the literature. ''Water can perineum'' is also known to occur with gonorrhoea but our patient had a negative urethral smear for Gram negative diplococci and had features suggestive of urethral tuberculosis. Further, the strictures, fistulas, and lymphoedema had led to ''saxophone'' deformity of the penis. Such deformity is well known with lymphogranuloma venereum, but is unknown in tuberculosis.

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South Asians with HIV in London: is it time to rethink sexual health service delivery to meet the needs of heterosexual ethnic minorities?

Recent conservative estimates suggest that at the end of 2002, 4.8 million people were living with HIV/AIDS in south Asia including 4.58 million in India.[1] In the United Kingdom there are estimated to be 1.5 million people of south Asian ethnicity. While the National Strategy for Sexual Health aims to improve health care in those who have HIV through earlier diagnosis,[2] studies have shown that that other ethnic minority groups present with advanced disease and not through routine genitourinary medicine (GUM) screening.[3 4] We studied the case notes of all adults self defining as of Indian, Pakistani, Bangladeshi, or Sri Lankan ethnicity diagnosed HIV positive from

Table 1 Characteristics of presentation of study population at time of HIV diagnosis (n = 117)

	Heterosexual men (n = 45)	Homosexual men (n = 36)	Heterosexual women (n = 27)	Other risk groups (n = 9)
AIDS illness at presentation	16 (36%)	6 (16%)	2 (7%)	1 (11%)
Median CD4 cell count $\times 10^6$/l (range)	178 (3–1,023)	381(4–810)	377 (10–1,104)	151(50–795)
Median HIV viral load copies/ml (range)	24 500 (50–1 000 000)	24 636 (425–3 000 000)	7822 (173–489 184)	12 870 (6676–57 530)
Reasons for HIV test				
AIDS/symptomatic	27 (60%)	11 (31%)	7 (26%)	2 (22%)
Known HIV+ sexual partner	3 (7%)	4 (11%)	12 (44%)	0
Routine screen for sexually transmitted infections	1 (2%)	16 (44%)	1 (4%)	0
Patient request	7 (15%)	3 (8%)	2 (8%)	2 (22%)
Child positive	3 (7%)	0	3 (11%)	0
Insurance/visa purposes	3 (7%)	1 (3%)	0	2 (22%)
Antenatal screening	0	0	2 (7%)	0
Other	1 (2%)	1 (3%)	0	3 (34%)

January 1985 to December 2002 attending four HIV treatment centres in London. Information was collected on demography, mode of first presentation, and clinical stage of HIV infection.

In all, 117 patients were identified, 30 women and 87 men. The number of new diagnoses among south Asians increased by more than threefold over the period 1996 to 2002 compared to earlier years (25 diagnoses before 1996, 90 diagnosed from 1996–2002).

The median age at diagnosis was 38 years (range 19–64 years) for men and 28 years (range 20–55 years) for women. Forty five patients (38%) had originated from Africa, 28 (24%) from India, and 18 (15%) from the United Kingdom. The majority were of Indian ethnicity (95/117; 81%) with the next largest ethnic group being Sri Lankan (12/117; 10%).

The primary mode of transmission was heterosexual sex (72/117; 62%) with transmission through sex between men accounting for a further 31% (36/117) of cases. Four infections were acquired through blood transfusion, two through injecting drug use, one from a needle stick injury, and in two cases risk behaviour could not be identified. The majority (39%, 45/117) of patients identified Africa as the probable place of infection with 28% and 15% probably infected in the United Kingdom and India, respectively.

There were substantial differences in the reasons for testing between individuals in the main risk groups. In particular, heterosexual men and women were both significantly less likely than homosexual men to be diagnosed via routine attendance at a GUM clinic (2% and 4%, compared to 44%, respectively, $p = <0.001$, Fisher's exact test). Among heterosexuals, the main reason for testing in men was symptomatic HIV infection/AIDS (60% of men but only 26% of women), whereas women were more likely to be tested through partner notification of a known HIV+ sexual contact (44% v 7% in males) (table 1).

The median CD4 count at presentation overall was 300 (range 3–1104) cells $\times 10^6$/l . However, male heterosexuals presented with significantly lower CD4 counts (median 178, range 3–1023 cells $\times 10^6$/l) than either homosexual men (median 381, range 4–810 cells $\times 10^6$/l; $p = 0.01$) or heterosexual women (median 377, range 10–1104; $p = 0.02$).

While there are methodological limitations with retrospective case note reviews and differing reporting categories used for Asian ethnicity, our data confirm national surveillance reports of increasing HIV infection among Britain's south Asian communities.[5] The four centres taking part in this study reported 90 cases from 1996–2002 representing one in three of all HIV positive south Asians reported in this time period. Despite the fact that the majority of these were not diagnosed through routine GUM screening the median CD4 count at presentation of heterosexual and homosexual men was consistent with national trends.[6] Indeed, south Asian women presented higher CD4 counts than seen nationally, primarily attributable to effective partner notification. While south Asians still represent less than 5% of all reported HIV positive diagnoses in UK ethnic minority groups[5] (Asians 334; black Africans 8848; black Caribbeans 844) numbers are likely to continue to increase in the future and methods for encouraging early presentation need to be developed in response to this.

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Failure to maintain patient access to GUM clinics

We read with interest the article published by Cassell *et al*[1] about the maintenance of patient access to genitourinary medicine (GUM) clinics following a switch to an appointment based system. Their data show no significant change in the age, ethnic mix, symptom status, and disease mix following the change to appointments. In addition, such a system of 35% prebooked appointments produced an increase in the number of patients seen over that time.

A new appointment based system was introduced at the John Hunter genitourinary medicine clinic at the Chelsea and Westminster Hospital in October 2001. This comprised 80% of appointments which were prebooked with a further 20% allocated on the day following triage by a nurse. All patients with symptoms were seen on the day of presentation.

We have analysed the results from two 9 month periods, taken immediately before the change and 3 months after the introduction of an appointment based system. The total number of patients and sex ratio seen

Table 1 Total number of STI diagnoses

	No (%)		
	Jan–Sept 2001	Jan–Sept 2002	Relative drop (%) (95% CI)
Total no of patients attending	11714	11345	3.2 (2.8 to 3.5)
Patients new to clinic	5191 (44.3)	4669 (41.2)	